

SOFIA Science Lunch Talk

Date: Monday March 15, 2004

Speaker: Göran Sandell, USRA-SOFIA

Title: Cold and Out of Sight - the Youngest Protostars in NGC7538

Abstract:

The talk starts with a brief overview of star formation and then goes on to show what we can learn about star formation from studying the active high-mass star forming molecular cloud NGC 7538. I present new results from deep 3 and 1 mm BIMA observations in both line and continuum. I discuss VLA results, both drawn from archival VLA data as well as from dedicated recent observations. These BIMA and VLA observations show in unprecedented detail new results on some of the well-studied high-mass protostars like IRS1, IRS9, and NGC7538S. IRS1 and NGC7538S are known to have rotating accretion disk. I show they exhibit inverse P Cygni profiles, which confirms that they are very young and still in an active accretion phase. These observations have also unraveled new low-to intermediate-mass protostars, which are seen only as H₂O masers or as cold deuterated NH₃ clumps (NH₂D), which already show evidence for disks.